

**CLAIMS**

1. Lining support (10) comprising a plurality of conductive pads (12, 427, 418, 414') formed on a substrate, associated with a shared addressing contact (18, 424) and means of selecting at least one pad to be lined by electrochemical means, among the plurality of pads (12, 427, 418, 414'), characterised in that the selection means comprise resident means (20, 422, 414, 427, 418) of shifting a polarisation voltage that needs to be applied to the shared addressing contact (18, 424) to obtain a deposit (429 respectively (434) at the level of a first group of pads (12, 427, 418) electrically coupled to the shared addressing contact (18, 424) without obtaining a deposit on a second group of pads (12, 418, 414' 414') electrically connected to the same shared addressing contact (18, 424).

2. Lining support (10) according to claim 1, characterised in that the means (20, 422, 414, 427, 418, 414) of shifting the voltage to apply to the shared addressing contact (18, 424) are constituted by the fact that the conductive pads consist of a first conductive material (418, 427, 422, 414), the pads of the second group consisting of a second conductive material (418, 427, 422, 414) different to the first material.

3. Lining support (10) according to claim 2, characterised in that the first and second conductive materials (414, 422) consist of semi-conductor

materials (414, 422) of the same nature having differing dopings.

4. Lining support (10) according to one of  
5 claims 1 to 3, characterised in that voltage shift  
means (20, 422, 414, 427, 418, 414) comprise threshold  
means comprising at least one diode (13, 422, 414)  
connected between the shared addressing contact (18,  
424) and each of the pads (12, 414', 418) of the second  
10 group.

5. Lining support (10) according to claim 4,  
characterised in that the diode (13, 422, 414) is  
polarised in the open sense from the shared addressing  
15 contact (18, 424) to at least one conductive pad (12,  
414', 418).

6. Lining support (10) according to claim 1,  
having conductive pads (12) lined by an electro-  
20 initiated lining, characterised in that the shift means  
comprise at least one electrical resistance (15) of  
value (R) sufficient to prevent the lining of the pads  
of the second group (12) under the application at the  
shared addressing contact (18) of a voltage allowing  
25 the lining of the pads (12) of the first group.

7. Lining support (10) according to claim 1, in  
which the resident means of shifting a polarisation  
voltage comprise at least one resistor (15) and at  
30 least one diode (13) in series.

8. Lining support (10) according to claim 1, comprising at least one conductive pad (12, 427, 418, 414') lined in the form of an element chosen among: a chemical test pad, a biological test pad, a fusible material anchoring pad, an electrical contact pad, a mechanical contact pad, a membrane, a seismic weight of an accelerometer and a condenser plate.

9. Support (10) according to claim 1, comprising a semi-conductive layer (414) of a first type of conductivity and, in the layer (414), a plurality of doped regions (422) of a second type of conductivity, each doped region of the second type of conductivity being connected to at least one conductive pad (414) constituting a surface of the substrate, and in which the doped regions of the second type (422) of conductivity form with the layer (414) diode voltage shift means.

10. Support (10) according to claim 1, in which the conductive pads (12) are arranged on a first face (101) of a substrate (14) and comprising on a face opposite (102) to the first face (101), a conductive layer (120), opposite conductive pads (12), the conductive layer forming a shared addressing contact (18).

11. Support (10) according to claim 1, in which the conductive pads (12) are arranged on a first face (101) of a substrate (14) and comprising on a face opposite (102) to the first face (101), a conductive

layer (121), opposite the conductive pads (12), the conductive layer forming a shared addressing contact (18) and in which the substrate (14) has a resistivity of value sufficient to prevent the lining of at least one conductive pad (12) of the support (10) under the application at the shared addressing contact (18) of a voltage allowing the lining of at least one other pad (12) of the support (10).

12. Device, in particular sensor, comprising a support according to one of claims 1 to 11.

13. Sensor comprising a support according to one of claims 1 to 11, characterised in that a support of the sensor comprises conductive pads (427, 418, 414') formed by first (418) and second (414') materials different from each other, electrically in electrical contact with each other and bearing first (434) and second (428) linings respectively different from each other.

14. Sensor according to claim 13, characterised in that a support of the sensor comprises a first conductive pad (418) formed by a conductive material in electrical contact with a semi-conductor material of a first type (414), said material being in electrical contact uniquely with a semi-conductor material of a second type (422) itself in electrical contact with a shared addressing contact (424) by means of a second conductive pad (427), said first (418) and second (427)

pads of a same conductive material bearing linings (429, 434) different from each other.

15. Sensor according to one of claims 13 or 14,  
5 characterised in that the different linings each comprise at least one electro-grafted lining.

16. Method for forming a support comprising lined conductive pads, in which one brings into contact  
10 the pads of the support with at least one medium (34) containing a lining material, or a precursor of a lining material, and one applies at least one polarisation voltage between a shared addressing contact (18) and a reference electrode (32), method  
15 characterised in that

one forms the conductive pads of the support with a first conductive material and others with a second conductive material, or

one forms on the support voltage shift means  
20 arranged between the common addressing contact and the first pads, in such a way that a voltage applied to the shared addressing contact corresponds to a first voltage value on the first pads and to a second voltage value on the second pads

25 one applies to the shared addressing contact a sufficient voltage to initiate the lining of the first pads, and insufficient to allow the lining of the second conductive pads.

30 17. Lining method according to claim 16, characterised in that the lining material, or the

precursor of the lining material, leads, for at least one of the pads, to an electro-initiated lining.

18. Lining method according to claim 16,  
5 characterised in that one uses a support in which the voltage shift means are threshold means, and in which one carries out a lining by electro-monitored or electro-initiated means.

10 19. Lining method according to claim 16, characterised in that one uses a support in which the voltage shift means comprise at least one resistance and in which one carries out a lining by electro-initiated means.

15 20. Lining method according to claim 17, in which one applies the polarisation voltage by carrying out at least one scan between a voltage less than or equal to a lining threshold voltage ( $V_g$ ,  $V_{gA}$ ,  $V_{gB}$ ) and  
20 greater than or equal to a saturation voltage ( $V_{sat}$ ,  $V_{satA}$ ,  $V_{satB}$ ).

21. Lining method according to claim 17, in which one forms a passivation lining in at least one  
25 first step of the method, by bringing into contact conductive pads with a first medium and in which, during a subsequent lining step, one brings into contact the conductive pads with a second medium, to line the pads left unlined during the first lining  
30 step, or a previous lining step.

22. Lining method according to claim 17, in which one brings into contact the conductive pads with at least one medium suited to an electro-initiated lining, comprising at least one compound chosen from  
 5 among vinylic monomer, cyclic monomers, diazonium salts, iodonium salts, sulphonium salts and phosphonium salts, and mixture thereof.

23. Lining method according to claim 16, in  
 10 which brings into contact the pads of the support with at least one medium suited to an electro-monitored lining, comprising at least one compound chosen from among a metallic salt or a polymer and in particular a poly-electrolyte, or a precursor of conductive  
 15 polymers, and particularly pyrrole, thiophene, aniline, or derivatives thereof, or an electropolymerisable monomer such as phenols, ethylene diamine and, more generally, diamines.